

ENGINEERS WITHOUT BORDERS

LAFAYETTE COLLEGE CHAPTER



LETTER FROM THE PRESIDENT

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LETTER FROM THE PRESIDENT

ADVISOR ACKNOWLEDGEMENT

CONTACT US

»»» WRITTEN BY CHARLIE FOSTER

I took over as president of Engineers Without Borders from James Galbraith after being a project leader and vice president the year before. I have been in the club since my first semester freshman year when the club had meetings over zoom with no one on campus. Engineers Without Borders gave me an avenue to become a student leader in an area very close to my heart. Since I had experience on

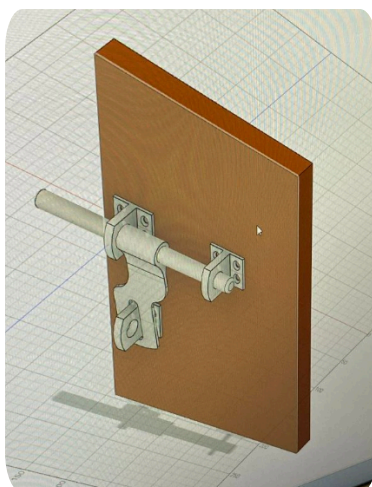
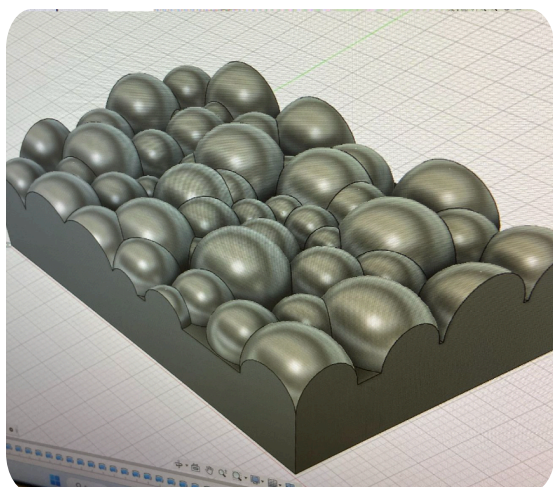
the executive board the previous year, I understood that my responsibilities totaled to make the club run smoothly. I would like to thank the rest of the executive board during my presidency for supporting me throughout the year: Finn Smith (vice president), Imaan Ali (treasurer), Ian Duffy (Outreach Chair), Thomas Packett (Outreach Chair), Pacey Ely (Communications Chair) and Joe Laughinghouse (Public Relations Chair). These board members were crucial to the operation of the club and we wouldn't be in this position without them and their support. (Letter continued on page 5)

PROJECT UPDATES

MENSTRUAL EQUITY PROJECT

>>> A LESSON LEARNED

The Menstrual Equity Project that EWB undertook at the start of the 2024 class year was an opportunity for the club to partner with another campus organization (LRAJE) to provide a solution that was desperately needed. In this project the club learned of the challenges that come with that. The initial solution was to modify the preexisting menstrual product dispensers to add smart capability. We quickly learned of the challenges we would've faced from the Lafayette ITS department and so we scaled back after telling LRAJE of our findings to have a self reported system. In our trials of that we found that a self reporting system wouldn't be functional because there wasn't enough data to give an accurate level of products remaining. We told LRAJE of this and also had the realization that this was no longer going to be an engineering project so we sadly had to stop the project after one semester.



DEMENTIA BOARDS

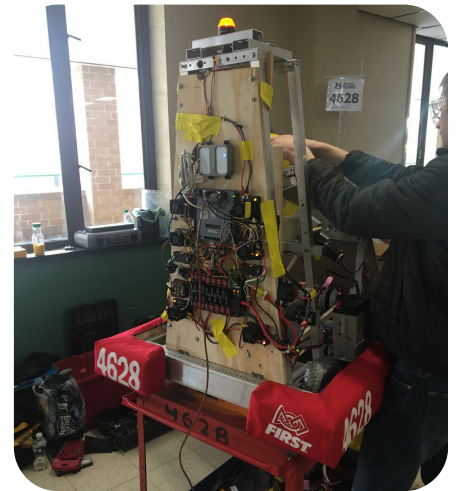
>>> IN PROGRESS

Our group is committed to making dementia boards, which are essentially boards with all sorts of fidgets and tactile functions on top of it, including textures, buttons, latches, handles, switches, etc. The boards are meant to assist dementia patients in recovering motor skills and knowledge of basic functions. Furthermore, these boards are made at the service of the Gracedale Nursing Home in Nazareth, PA, to help the residents living there. So far in the project, there have been meetings with the people at Gracedale about specifications with the board, the board has been 3D modeled in Autodesk Fusion, and the construction of the board has commenced. At the end of this project, four boards will be delivered to Gracedale, where they will be placed around the nursing home to be used by the residents.

PROJECT UPDATES

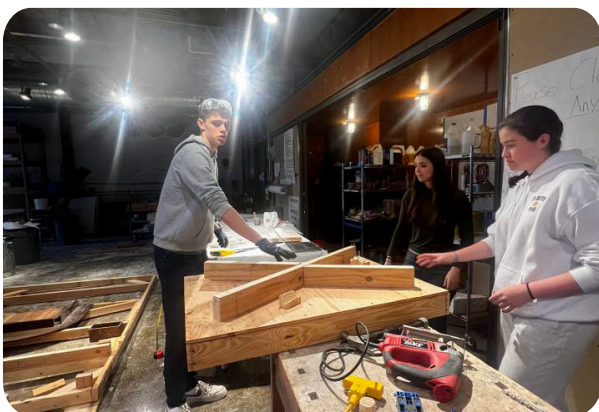
ROBOTICS

This year, the Easton Area High School Robotics Mentoring Program has shifted from providing direct support to the students building the robot. Instead, the team is designing and conducting interactive workshops, focused on fundamental, robotics engineering skills. This includes programming version control, control theory, and computer aided design. We have completed the content for the version control lecture and are nearly done prototyping the control theory testbench.



The Easton Community Garden project's goal was to create accessible garden beds for people in the Easton community. The garden beds were designed and went through many iterations. They evolved from being designed for persons with disabilities to being aimed toward the elderly members of the community that were already active gardeners. Other ideas were brainstormed to improve the garden but could not be feasibly completed at the time. The garden beds were approved by a professor and the client. Gathering materials and construction followed, where one table was lovingly put together with the help of Nestor Gil in the arts studio. The garden bed was finally given to the client and the project may continue if more garden beds are needed or revisions are needed.

EASTON COMMUNITY GARDEN



AT OR NEARING COMPLETION!

FINISHED: PICNIC TABLE CANOPY

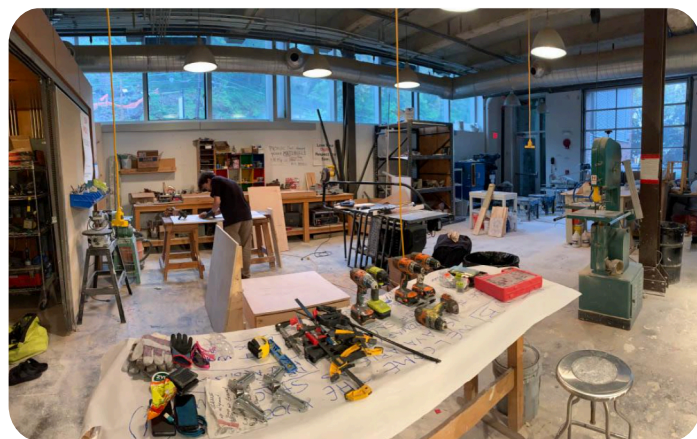
The picnic table canopy stands tall in the Delaware Canal State Park in Upper Black Eddie and is open for the public's use. We finished construction and delivery of the canopy at the end of the fall semester in 2022. However, due to the ground being too cold to effectively dig a solid foundation, installation of the canopy was delayed until the end of the Spring semester in 2023. This was a very rewarding project and our team is happy to finally realize the finished product.



ALMOST DONE:

POCKET SKATE PARKS

In Pocket Skate Parks we tried to get more into the volunteering aspect of Push Ahead: the skate school at Paxinosa Elementary School. Looking at how the ramps are being used by the school as well as seeing the wear and tear on the ramps was a good basis for what we could improve upon in our next designs. We started brainstorming designs for a quarter pipe to bring to the skate school but ran into some trouble with interfacing the ramp with the ground and making sure it was in line with the rest of the modular ramps that we built in previous years. We plan to finish construction at the start of next semester to wrap the project up.



LETTER FROM THE PRESIDENT

(CONTINUED)

Elections happen in our club before every winter break so I knew that I would vacate the position during winter break. I was extremely happy to hand off the presidency to Finn Smith who was my vice president as well as a project leader before that. He has insurmountable experience within the club and knows the operations like the back of his hand. I know that with Finn at the helm, the club will continue its unprecedented success.

On top of all the student positions, our faculty advisors have a critical hand in moving our club forward in the best fashion. The president and vice president are the advisors' lessons for what the state of the club is and they are crucial to giving us an outside perspective. The year I became president our advisors were Professor Mary Roth (civil engineering) and Professor Toby Rossmann (mechanical engineering). The two of them gave more advice than I could have imagined and opened up the board to new ideas of where our club should go. In the middle of my presidency, Professor Arthur Kney came off sabbatical and took over for Professor Roth. With his return, he brought what the club was trying to achieve before COVID.

I am very proud to have had Engineers Without Borders be such a big part of my college experience and being within this club has allowed me to grow as a leader, communicator, and person. I am thrilled to see the next leaders of the club grow and push the club to higher levels than I could have imagined.

Sincerely,
Charles Foster
Class of 2024
President 2023



ADVISOR ACKNOWLEDGEMENT

WRITTEN BY FINLAY SMITH

In order for us to make a meaningful difference we often rely on help from our faculty advisors. Their experience and guidance allow us to ensure we are applying our engineering skills in the best possible way. This past year, we were advised by Professor Arthur Kney from the Civil Engineering department and Professor Toby Rossmann from the Mechanical Engineering department. Professor Kney was previously an advisor and took over from Professor Roth last year after he came back from his sabbatical. In the Fall of 2023, Professor Rossmann was also on sabbatical but still wanted to keep his position as our faculty advisor. At this same time, he stepped down from being the head of Dyer Center at Lafayette but still remains extremely involved. Our faculty advisors are arguably the most important resource we have as the EWB executive board. Their expertise and knowledge accelerate the progress of each individual project and ensure we are on the right track. Meetings with the Chapter President and Vice-President occur weekly. In these meetings, there are discussions of each project and its goals and how we should move forward with them and see if the advisors have any suggestions for contacts as well as resources to help the project leader. The club standing is also discussed and the advisors advise on how to bring in new ideas and projects. The club faculty advisors are instrumental in ensuring we are able to service the local community with our engineering skills. They ensure that we run one of the most successful engineering clubs on campus. We would like to thank them for their help and wish Professor Kney the best in his future endeavors. In his place, Professor David Brandes, head of the Integrative Engineering Program, will take over. Without their support, we would not be able to complete as many projects, and the positive impact we have would simply not be possible.



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